

# PATENT ABSTRACTS OF JAPAN

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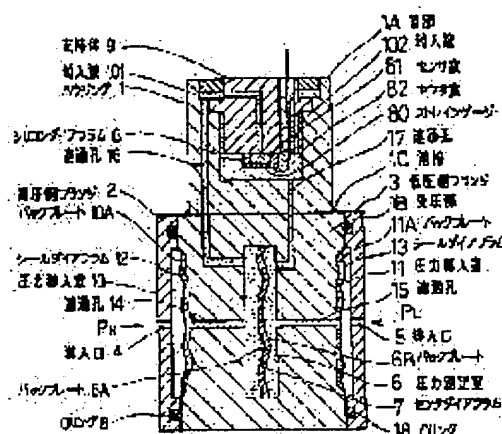
## (54) DIFFERENTIAL PRESSURE TRANSMITTER

### (57)Abstract:

PURPOSE: To reduce the span variation due to the variation of an ambient temperature by making the rates of the variation of hardness of a center diaphragm and a seal diaphragm roughly equal.

CONSTITUTION: The materials of a center diaphragm 7 and a seal diaphragm 12, 13 are respectively set such materials that both rates of the variation of hardness per the variation of an ambient temperature are roughly equal. The pressure  $H_z$  that acts to the high pressure side and the pressure  $P_L$  that acts to the low pressure side, individually act the diaphragms 12, 13 and surfaces of silicon diaphragm 8 respectively via sealed liquids 101, 102 so that the diaphragm 8 bends. The bend is detected by a strain gauge 80 and the differential

pressure is converted to an electric signal to be output therefrom. At this time the diaphragm is deformed to the low pressure side, thereby the movement of the sealed liquids of 101, 102 due to the differential pressure are absorbed. Therefore, it is possible to reduce span errors when the rates of variation of hardness of the diaphragms of 7, 12, 13 are roughly equal.



## LEGAL STATUS

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